

chemistry and the rapid advances which are taking place owing to chemical research and improved methods prevent any book, however well up-to-date on its publication, from holding its place unless it is continually revised. In this respect Allen's book required revision along with other reference books of a similar nature. The work has now been taken up by new editors, and when this is the case one naturally scrutinises somewhat carefully the new edition to ascertain whether real improvements have been made. It must be said at once that the revision of another man's work is much more difficult than to start to write a book *de novo*, and the attempts which one naturally makes to leave in paragraphs untouched which were written ten years ago and incorporate them with new material, the reverse of easy.

The editing is being jointly carried out by Mr. W. A. Davis, of London, and Mr. Samuel S. Sadtler, of America. As British and American methods of analysis are not always quite similar this editorship strikes one as being a wise, but at the same time rather difficult arrangement. The individual sections are, as is always the case in reference books of this nature, written by different collaborators. In this volume Dr. F. C. Garrett deals with hydrocarbons of the aliphatic, olefine, and acetylene series and of tars. This section, also under acetylene, includes the valuation of calcium carbide and a reference to the method of Lunge and Cedercroft in the *Zeitschrift für anorganische Chemie* is given. The abstract of the method, however, is hardly sufficiently full. Surely such books as the one under review are written to enable the reader to carry out estimations without having to refer to the original literature. We do not mean that all processes for the analysis of a given substance should be given, but surely one—the one the writer of the section considers the best—should be set out in detail. The others need be only briefly referred to, or the references to the original literature given.

The processes of tar analysis differ so considerably in detail in different works and with the various processes of distillation—that is to say, high- or low-temperature distillation—and the quality of the coal, that probably the author is right in giving a more or less general survey of the subject. We think, however, that the tars produced from the water-gas process and coke-oven tar might have been described in greater detail.

Mr. Sadtler has compiled the section on bitumens, and treats of the distillation of petroleum, ozokerite, asphalt, petroleum and shale products, cyclic hydrocarbons from coal tar, coal tar naphtha, and other similar products. This section is fairly full, and occupies 223 pages, that is to say, rather more than one-third of the book. On the whole the section on petroleum oils is very good. The subject is a big one, but most of the ground is covered in a quite satisfactory manner. One can see that the author is largely writing at first hand, and although he quotes many authorities, he usually lets the reader know which he considers is the most trustworthy method to adopt.

Mr. Sadtler is also responsible for anthracene and its associates and for the phenols. The latter section is naturally of great importance owing to the extended

employment of phenols and phenolic derivatives for disinfecting and antiseptic purposes. The subject is treated in a broad and comprehensive manner, and deals not only with phenols and creosotes from coal tar, but also from various other sources, such as blast-furnace tar, shale-oil tar, and so on.

Mr. W. A. Davis is responsible for the sections on naphthalene and its derivatives, and phthalic acid and phthaleins, Mr. W. P. Dreaper for gallic acid and its allies, and Mr. Edward Horton for the aromatic acids.

Taken as a whole, the volume has been well brought up-to-date, and will, we think, still maintain its place as an invaluable book of reference in the laboratory, particularly of the technical chemist. Its one fault to our mind is that the authors are apt to be rather too discursive and rather disinclined to put the analytical particulars in a concrete form. The book professes to deal with commercial organic analysis, but sometimes one has to read a very long way before coming to any analytical facts. Of course, it is of great assistance to read all about the properties of the substance, but the exact analytical methods are of the utmost importance.

By these remarks we do not wish to detract from the merits of a most valuable work, but to point out where the succeeding volumes might, in our opinion, be strengthened and made even more valuable.

F. M. P.

#### TASMANIAN SKULLS.

*Dioptographic Tracings in Four Normal of Fifty-two Tasmanian Crania.* By Prof. R. J. A. Berry and A. W. D. Robertson. (Melbourne, Transactions of the Royal Society of Victoria, vol. v., part i.) (Melbourne : Kemp, 1909.)

WITH the death of "Lalla Rhoop" in 1876 one of the most interesting of human races passed out of existence. "When we reflect," write the authors of this atlas, "that the Tasmanian aboriginal carried into our own times the primitive culture of Palæolithic man and many of the structural peculiarities of *Homo neanderthalensis* we realise, the scientific importance of the study of Tasmanian remains." They have made by far the largest contribution to the material on which our conception of the Tasmanian race must be based, and made it at a most unexpected period. In his well-known monograph on the Tasmanian race, published two years ago, Sir William Turner gave a detailed list of all the skulls then known, seventy-nine in number, and was of opinion that further additions were unlikely. The authors of this atlas have been successful in finding forty-two hitherto unknown specimens, thirty-three of which they discovered in various private and museum collections in Tasmania, while nine they unearthed from a native burial ground. In preparing and publishing an atlas which contains 212 accurate tracings of these crania, the authors had two objects in view: they wished to make the material thus discovered available for the study of anthropologists throughout the world; they also wished to secure a permanent record of crania which, being chiefly in the hands of private owners, are liable to be lost or destroyed.

The authors have thus rendered a signal service to the cause of anthropology, nor must we overlook the liberality of the Royal Society of Victoria for undertaking the expensive work of publishing these elaborate records. It is especially pleasing to note that a strong school of physical anthropology is springing up in Melbourne, one that is keenly alive to the necessity of studying the native races as they now are, and of securing permanent records of their physical characters.

The publication under review may be described as a craniological monograph of a new type; there is practically no letterpress, no columns of measurements, merely tracings from which measurements may be estimated. In brief, the authors have made a large addition to Tasmanian records, but added nothing to the story of this extinct native race. Very likely they intend to give their interpretations of these tracings when they come to deal with their investigations of the Australian natives. Still, we are of opinion that the scientific value of the present publication would have been greatly enhanced if the authors had included the results of the elaborate study they have made of this new collection of Tasmanian crania.

#### PHILOSOPHY.

- (1) *Wolffsche Begriffsbestimmungen. Ein Hilfsbuchlein beim Studium Kants.* By Prof. Julius Baumann. Pp. iv+56. Price 1 mark.
- (2) *Wilhelm von Humboldt's ausgewählte philosophische Schriften.* Herausgegeben von Johannes Schubert. Pp. xxxix+222. Price 3.40 marks.
- (3) *Fichte, Schleiermacher, Steffens über das Wesen der Universität.* By Eduard Spranger. Pp. xlvi+291. Price 4 marks.
- (4) *Baruch de Spinoza. Ethik. Siebente Auflage.* By Otto Baensch. Pp. xxxii+315. Price 3.40 marks.
- (5) *Encyklopädie der Philosophie.* By A. Dorner. Pp. vii+334. Price 6 marks.  
(Leipzig: Verlag der Dürr'schen Buchhandlung, 1910.)

(1) **A COMPILATION** of Christian Wolff's definitions, by the professor of philosophy at Göttingen. Dr. Baumann made this compilation many years ago, for his own needs, purposely confining himself to the problem of the theory of knowledge. Recently, when re-reading Kant's "Kritik der reinen Vernunft," he took up his compilation and recognised the parallelism with Wolff. This little book is therefore now published as a help to the study of Kant. It contains useful definitions, with references, of terms such as *Empfindung*, *Vorstellung*, *Wahrnehmung*, *Idee*, *Begriff*, which are the chief elementary difficulties in the way of the student of Kant, and of German philosophical writers in general.

(2) This selection of Humboldt's philosophical writings is intended to spread the knowledge of his many-sided nature and powers among a wider circle of readers than has hitherto been reached. Those who wish to go more deeply into his treatment of the subjects may be referred to the great standard edition of his works, which appeared during the course of last

year. The present volume contains chosen specimens on such diverse subjects as Goethe's "Hermann and Dorothea," "Latium and Hellas, or Considerations on Classical Antiquity," "Philosophy of Language," "Philosophy of Religion," the "Bhagavad-Gîtâ," and "Pedagogy." The matter seems, naturally, a little old-fashioned, and the aesthetical parts appeal chiefly to readers who make a special study of the history of German literature. Humboldt was a humanistic philosopher, leaving behind him the individualism and general aesthetic hurly-burly of the "Sturm and Drang" period.

(3) Another book of chiefly historical interest, consisting of reprints of various writings of the three authors named, concerning ideals of university teaching. The centenary of the University of Berlin, which was recently celebrated, gives the suitable occasion. Dr. Spranger furnishes an introduction in which he compares Berlin with other universities. The former "was born in an hour of great changes: this birth in the living flux of things, permeated with the thoroughly modern spirit, gave her living power, and made her a model to her older sisters, who are but now stripping off the old forms, and growing into the new."

(4) In his "Biographical History of Philosophy," G. H. Lewes said that he never hoped to find foothold in the boundless morass of metaphysics, after he once fairly saw the reasons which rendered Spinozism unacceptable. The present edition of the famous "Ethics" (the seventh in German translation from the original Latin) seems to indicate that there are readers still to be found for the writings of the subtle-minded though intensely spiritual Jew, to whom—as justifiably as in the case of Novalis—the term "God-intoxicated" has been applied. The translator writes an introduction, in which he remarks that "Spinoza's philosophy is the most impressive concentration of the thought of the seventeenth century into a coherent view of the world and of life," even though those times produced Descartes and Leibniz. And modern philosophy, for the most part, will certainly agree.

(5) Dr. Dorner, who is professor of theology at Königsberg, is a follower of Hegel rather than of the great analyst whose name is inevitably recalled by Königsberg. The present volume, which is not an encyclopædia in the English sense, is a metaphysical work dealing chiefly with the theory of knowledge and doctrine of categories. The following sketch will give the author's general attitude.

The progress of philosophy seems the same now as in antiquity. Kant occupies the same position in modern philosophy as Socrates did in the ancient. After Socrates came Plato and Aristotle, to whose systems our modern philosophy of the Absolute corresponds. Then came the Stoics and Epicureans, with a revulsion to the practical side of things. The modern analogue is found in those thinkers who lay emphasis on feeling and will. The chief difference between old and new is, that the subjective side is now much more in the foreground, which tendency shows itself particularly in the importance assigned to psychology. Some, indeed, candidly regard it as the central science. Also, in modern life the empirical